

[Method and device for fluid sampling]

Abstract

A fluid stream sampler enables variable flow rate controlled air sampling, as an attachment to a vacuum source, typically a conventional household vacuum cleaner. The fluid stream sampler includes a housing body having a vacuum outlet opening and a sampling port inlet. A volumetric flow rate indicator is disposed in the flowpath between the vacuum outlet opening and the sampling port inlet. An adjustable damper panel interposed in the flowpath regulates the vacuum pressure within the housing body. In operation, a vacuum imparted by the vacuum source directs a fluid stream along the flowpath between the vacuum outlet opening and the sampling port inlet such that, upon moving the damper panel to a desired position within the flowpath, a desired volumetric flow rate is achieved as measured by the indicator. The desired volumetric flow rate corresponds to a preferred flow rate specified for a fluid constituent sampling medium interposed in the flowpath at the sampling port inlet. A fluid stream sampler enables gas bag sampling, as an attachment to a vacuum chamber, typically a conventional paper shipping tube. The vacuum

chamber includes a vacuum outlet opening and a inlet. A gas bag is disposed in the chamber. A self-sealing valve is disposed in the bag and a straw is disposed in the valve. The straw having a inlet exterior to the vacuum chamber and a outlet interior to the gas bag. Whereby a vacuum imparted by the fluid stream sampler at the outlet port directs a pressure drop interior to the vacuum chamber and a pressure differential effect on the atmosphere interior to the gas bag, such that, a fluid stream is developed at the straw inlet through the valve and into the interior of the gas bag.